



R RAHMANN

Quality for the Future

Electric actuators for door and gate operation



Electric actuators by Rahmann are used all over the world for actuating, controlling, and regulating tasks. Since 1961, our actuators have been manufactured for the heavy industry, e.g. for mining, steel production, and power station construction. In the course of automation, applications in transport and traffic engineering were increasingly added.

Electric actuators of type K7B-405... / K9B-405... are mainly used in the area of door and gate actuation. In this respect, it does not matter whether simple access doors, solid factory gates, or safety-relevant locking systems are to be moved reliably.

The electric actuator by Rahmann is able to safely control the different forces required for the actuation process (acceleration, displacement force, and brake force).

These electric actuators excel by high design flexibility and can thus be used under most various conditions. In addition to the high reliability of these drives, the favourable price-performance ratio is outstanding.

How to solve the problem:

The Rahmann GmbH Company has developed a special and reasonably priced actuator which is able to manage these problems automatically. The electric actuator uses a rotary field magnet as drive. This rotary field magnet can be powered fully and permanently even at a standstill (speed: zero) and thus generate a torque without overheating. Regarding the electric actuator, this means that the travel speed decreases or even comes to a standstill if the power is exceeded, but that the force is retained.

Should the disturbing effect continue to rise, the electric actuator gives way automatically, i.e. the connecting rod can be pushed back without damaging any mechanic or electric components. Thanks to this technology, the actuators may even be used in areas where a specific vacuum is applied to the doors.



The previous state-of-the-art:

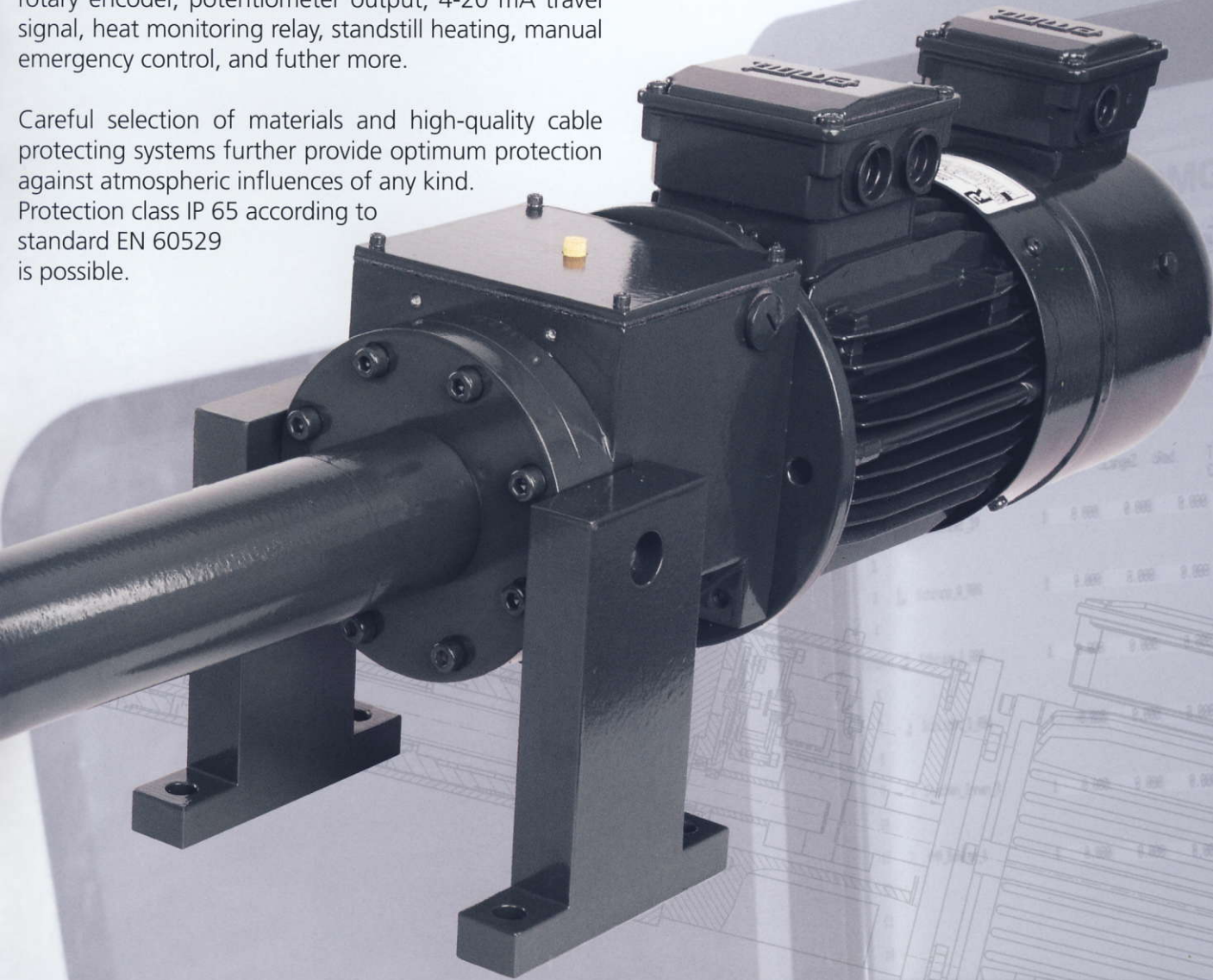
In the past, the drive design of actuators was often based on a three-phase asynchronous motor, partly with mechanic or electronic overload device. In this case, a cut-off is performed if the force is exceeded, e.g. by wind load. The actuation process is interrupted and has to be restarted by the operator. Or if the actuation process is impaired by snow in winter, the drive switches off immediately and is in failure mode. In order to cope with such disturbing factors, cost-intensive electronic devices were required, e.g. vector-controlled frequency converters or servo motors with corresponding electronic system.

If the electric actuator with rotary field magnet is idle, the door or gate can be actuated manually without any problems because the connecting rod of the electric actuator can be moved without applying any force. Utilization of a conventional frequency converter allows to control the electric actuator force in case of a rotary field magnet as in contrast to the three-phase motor the torque is controlled instead of the speed. The opening or closing operation can thus be controlled individually.

This electric actuator does not require any special electronic equipment and the costs are clearly below those of known systems. Sensitive electronic or mechanic devices are not necessary whereby a sustainably high reliability and long service live are given.

It goes without saying that electric actuators with rotary field magnet by Rahmann can be fitted with any proven additional device such as limit switch, rotary encoder, potentiometer output, 4-20 mA travel signal, heat monitoring relay, standstill heating, manual emergency control, and further more.

Careful selection of materials and high-quality cable protecting systems further provide optimum protection against atmospheric influences of any kind. Protection class IP 65 according to standard EN 60529 is possible.



The most important technical features of types K7B-405... / K9B-405...

- Motor: 400 V DC
- Limit switch (option)
- Shearing / tensile force: 2-8 kN
- Actuating speed: 40 mm/sec
- Housing: various metal alloys possible
- Connecting rod, hard-chromium plated
- IP 65, ISO class F, possible without any problems
- Brake with manual emergency control (option)
- Maintenance-free



„Electric actuators Made in Wuppertal“

For many years, we have been designing drives which are intended for the most various motions and lockings. The flexibility of our engineering and production department allows us to deal with extensive requirements of our customers.

Rahmann drives have been well-proven through out the years under most difficult conditions of use and atmospheric influences. Thanks to the increasing know-how and the constantly high quality, our electric actuators can always meet ever rising technical standards.

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